

PATHWAY ANALYSIS - ZONING DISTRICTS

Line Item Reference	Document ID	Enter relevant data directly from development code			Summary and description of relevant indicators (uses, activity, or standards) impacting habitat	Formatted Response to two key questions: 1) What is the relationship between the source use or activity, the pathway, and the habitat? 2) What is the rationale for scoring this specific pathway for the following parameters: +/-0 (Col.10 a), Mag.(Col.11 b), Dur. (Col.12 c), Intensity (Col.13 d)?		Direct	Channelization	Impact to PFC POS - Positive NEG - Negative NTRL - Neutral	Magnitude City=3 Reach=2 Point=1	Duration Chronic=3 Episodic=2 Once =1	Intensity (Impact to Habitat) High=3 Medium=2 Low=1	Subtotal	Total Score
							Def./Quant.	Direct	Barriers						
							Def./NonQ	Direct	Buffers						
							Cond/Q.	Indirect	Contaminants						
							Cond/NQ	Indirect	Impervious Surfaces						
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
LI	DOC	Chapter Name	Sect #	Sect. Name	Description	Discussion/Justification	Filter	Impact	Pathway/Conveyance	+/-0 (a)	Mag. (b)	Dur. (c)	Int. (d)	ST	Tot.
1	LDC	RS-3.5 LD Residential	3.1.20	Permitted Uses	Low-density residential and civic uses are permitted. Conditional uses for this zone also are included in this pathway. <u>Indicators:</u> Horticulture (personal); tree, row, and field crops (personal); off-street parking	1 - Contaminants associated with residential uses include land application of horticultural chemicals and fertilizers and use of cleaners, solvents, oil-s, and sealants for incidental maintenance and repairs to structures and vehicles. Some contaminants will be absorbed by plants or soil-s, some will run off into storm sewers or waterways, and some will seep into the aquifer eventually resurfacing in lakes or streams. 10(a) - Negative: Land uses and activities are a source of contaminants. 11(b) - Reach: Land uses and activities only apply within the specified zone. 12(c) - Chronic: Land uses and activities persist for years as a source of contaminants. 13(d) - Low: Little harm to habitat because small quantities of contaminants are released in low concentrations. Stormwater is treated for quality and quantity by the City.	D/N	Indirect	Contaminants	NEG	2	3	1	6	6
2	LDC	RS-3.5 LD Residential	3.1.30	Development Standards	Density and minimum lot size establish density of development that can occur within the zone. <u>Indicators:</u> Density: 2-6 DU/acre; min. lot area = 8,000 SF; no max. lot coverage	1 - These density standards applied to residential zones result in a larger site footprint per dwelling unit. Large-lot (low-density) subdivisions typically contain less impervious surface with more yard and garden areas. Impervious surfaces increase the rate of runoff, concentrate pollutants, and interfere with groundwater recharge. 10(a) - Positive: Low-density residential development results in less impervious surface per acre compared with other zones. 11(b) - Reach: The standards only apply within the specified zone. 12(c) - Chronic: Once established, the standards persist for years . 13(d) - Low: Little harm to habitat occurs because the ratio of impervious to porous surfaces at this density is relatively low. Stormwater is treated for quality and quantity by the City.	D/Q	Indirect	Impervious Surfaces	POS	2	3	1	6	6
3	LDC	RS-5 LD Residential	3.2.20	Permitted Uses	Low-density residential and civic uses are permitted. Conditional uses for this zone are also included in this pathway. <u>Indicators:</u> Horticulture (personal); tree, row, and field crops (personal); off-street parking	1 - Contaminants associated with residential uses include land application of horticultural chemicals and fertilizers and use of cleaners, solvents, oils, and sealants for incidental maintenance and repairs to structures and vehicles. Some contaminants will be absorbed by plants or soils, some will run off into storm sewers or waterways, and some will seep into the aquifer, eventually resurfacing in lakes or streams. 10(a) - Negative: Land uses and activities are a source of contaminants. 11(b) - Reach: Land uses and activities only apply within the specified zone. 12(c) - Chronic: Land uses and activities persist for years as a source of contaminants. 13(d) - Low: Little harm to habitat occurs because small quantities of contaminants are released in low concentrations. Stormwater is treated for quality and quantity by the City.	D/N	Indirect	Contaminants	NEG	2	3	1	6	6

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LI	DOC	Chapter Name	Sect #	Sect. Name	Description	Discussion/Justification	Filter	Impact	Pathway/Conveyance	+/-0 (a)	Mag. (b)	Dur. (c)	Int. (d)	ST	Tot.
4	LDC	RS-5 LD Residential	3.2.30	Development Standards	Density and minimum lot size establish density of development that can occur within the zone. <u>Indicators:</u> Density: 2-6 DU/acre; min. lot area = 6,500 SF; no max. lot coverage	1 - These density standards applied to residential zones result in a larger site footprint per dwelling unit. Large-lot (low-density) subdivisions typically contain less impervious surface with more yard and garden areas. Impervious surfaces increase the rate of runoff, concentrate pollutants, and interfere with groundwater recharge. 10(a) - Positive: Low-density residential development results in less impervious surface per acre compared with other zones. 11(b) - Reach: The standards only apply within the specified zone. 12(c) - Chronic: Once established, the standards persist for years. 13(d) - Low: Little harm to habitat occurs because the ratio of impervious to porous surfaces at this density is relatively low. Stormwater is treated for quality and quantity by the City.	D/Q	Indirect	Impervious Surfaces	POS	2	3	1	6	6
5	LDC	RS-6 LD Residential	3.3.20	Permitted Uses	Low-density residential and civic uses are permitted. Conditional uses for this zone are also included in this pathway. <u>Indicators:</u> Horticulture (personal); tree, row, and field crops (personal); off-street parking.	1 - Contaminants associated with residential uses include land application of horticultural chemicals and fertilizers and use of cleaners, solvents, oil-s, and sealants for incidental maintenance and repairs to structures and vehicles. Some contaminants will be absorbed by plants or soil-s, some will run off into storm sewers or waterways, and some will seep into the aquifer, eventually resurfacing in lakes or streams. 10(a) - Negative: Land uses and activities are a source of contaminants. 11(b) - Reach: Land uses and activities only apply within the specified zone. 12(c) - Chronic: Land uses and activities persist for years as a source of contaminants. 13(d) - Low: Little harm to habitat occurs because small quantities of contaminants are released in low concentrations. Stormwater is treated for quality and quantity by the City.	D/N	Indirect	Contaminants	NEG	2	3	1	6	6
6	LDC	RS-6 LD Residential	3.3.30	Development Standards	Density and minimum lot size establish density of development that can occur within the zone. RS-6 has a maximum lot coverage of 40%, which directly regulates impervious surfaces such as the building footprint, parking lots, and driveways. <u>Indicators:</u> Density: 2-6 DU/acre; min. lot area = 5,000 SF for single family dwellings, 10,000 SF for duplex dwellings; max. lot coverage is 40% of lot area	1 - Impervious surfaces increase the rate of runoff, concentrate pollutants, and interfere with groundwater recharge. Large-lot (low-density) subdivisions typically result in less impervious surface with more yard and garden areas. The maximum lot coverage standard of 40% ensures that a portion of the site surface will consist of more porous material. This standard will reduce "flash" effects of stormwater and increase percolation rates. 10(a) - Positive: Maximum lot coverage establishes a 40% limit to most prevalent impervious surfaces. 11(b) - Reach: Development standards apply only within the specified zone. 12(c) - Chronic: Development standards persist once established. 13(d) - Moderate: Maximum lot coverage directly controls impervious surfaces and should significantly reduce impacts to habitat.	D/Q	Indirect	Impervious Surfaces	POS	2	3	2	7	7

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0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
LI	DOC	Chapter Name	Sect #	Sect. Name	Description	Discussion/Justification	Filter	Impact	Pathway/Conveyance	+/-0 (a)	Mag. (b)	Dur. (c)	Int. (d)	ST	Tot.
7	LDC	RS-9 MD Residential	3.4.20	Permitted Uses	Medium-density residential and civic uses are permitted. Conditional uses for this zone are also included in this pathway. <u>Indicators:</u> Horticulture (personal); tree, row, and field crops (personal); off-street parking	1 - Contaminants associated with residential uses include land application of horticultural chemicals and fertilizers and use of cleaners, solvents, oil-s, and sealants for incidental maintenance and repairs to structures and vehicles. Some contaminants will be absorbed by plants or soil-s, some will run off into storm sewers or waterways, and some will seep into the aquifer, eventually resurfacing in lakes or streams. 10(a) - Negative: Land uses and activities are a source of contaminants. 11(b) - Reach: Land uses and activities only apply within the specified zone. 12(c) - Chronic: Land uses and activities persist for years as a source of contaminants. 13(d) - Low: Little harm to habitat occurs because small quantities of contaminants are released in low concentrations. Stormwater is treated for quality and quantity by the City.	D/N	Indirect	Contaminants	NEG	2	3	1	6	6
8	LDC	RS-9 MD Residential	3.4.30	Development Standards	Density and minimum lot size establish density of development that can occur within the zone. RS-9 has a maximum lot coverage of 60%, which directly regulates impervious surfaces such as the building footprint, parking lots, and driveways. <u>Indicators:</u> Density: 6-12 DU/acre; min. lot area = 3,250 SF for single family dwellings, 6,500 SF for duplex dwellings; max. lot coverage is 40% of lot area	1 - Impervious surfaces increase the rate of runoff, concentrate pollutants, and interfere with groundwater recharge. The maximum lot coverage standard of 60% ensures that a portion of the site surface will consist of more porous material. This standard will reduce "flash" effects of stormwater and increase percolation rates. 10(a) - Positive: Maximum lot coverage establishes a 60% limit to the most prevalent impervious surfaces. 11(b) - Reach: Development standards apply only within the specified zone. 12(c) - Chronic: Development standards persist once established. 13(d) - Moderate: Maximum lot coverage directly controls impervious surfaces and should significantly reduce impacts to habitat.	D/Q	Indirect	Impervious Surfaces	POS	2	3	2	7	7
9	LDC	RS-9 MD Residential	3.4.40	Open Space Requirements	Minimum 40% of lot area must be developed as permanent open space. A portion of the open space (10% of lot area) must be outdoor living area that includes screening.	1 - Impervious surfaces increase the rate of runoff, concentrate pollutants, and interfere with groundwater recharge. The open space requirement ensures that a portion of the site surface will consist of more porous material. 10(a) - Positive: Medium-density residential development might otherwise be nearly 100% impervious. 11(b) - Reach: The standard applies only within the specified zone. 12(c) - Chronic: Once established, the standard will persist for years. 13(d) - Low: Marginal benefits to habitat because open space may include sidewalks and patio areas.	D/N	Indirect	Impervious Surfaces	POS	2	3	1	6	6

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10	LDC	RS-9 (U) MD Residential	3.5.20	Permitted Uses	Medium-density residential and civic uses are permitted. Conditional uses for this zone are also included in this pathway. <u>Indicators:</u> Horticulture (personal); tree, row, and field crops (personal); off-street parking	1 - Contaminants associated with residential uses include land application of horticultural chemicals and fertilizers and use of cleaners, solvents, oil-s, and sealants for incidental maintenance and repairs to structures and vehicles. Some contaminants will be absorbed by plants or soil-s, some will run off into storm sewers or waterways, and some will seep into the aquifer, eventually resurfacing in lakes or streams. 10(a) - Negative: Land uses and activities are a source of contaminants. 11(b) - Reach: Land uses and activities only apply within the specified zone. 12(c) - Chronic: Land uses and activities persist for years as a source of contaminants. 13(d) - Low: Little harm to habitat occurs because small quantities of contaminants are released in low concentrations. Stormwater is treated for quality and quantity by the City.	D/N	Indirect	Contaminants	NEG	2	3	1	6	6
11	LDC	RS-9 (U) MD Residential	3.5.30	Development Standards	Density and minimum lot size establish density of development that can occur within the zone. RS-9 has a maximum lot coverage of 60%, which directly regulates impervious surfaces such as the building footprint, parking lots, and driveways. <u>Indicators:</u> Density: 6-12 DU/acre; min. lot area = 3,250 SF for single family dwellings, 6,500 SF for duplex dwellings; max. lot coverage is 40% of lot area	1 - Impervious surfaces increase the rate of runoff, concentrate pollutants, and interfere with groundwater recharge. The maximum lot coverage standard of 60% ensures that a portion of the site surface will consist of more porous material. This standard will reduce "flash" effects of stormwater and increase percolation rates. 10(a) - Positive: Maximum lot coverage establishes a 60% limit to the most prevalent impervious surfaces. 11(b) - Reach: Development standards apply only within the specified zone. 12(c) - Chronic: Development standards persist once established. 13(d) - Moderate: Maximum lot coverage directly controls impervious surfaces and should significantly reduce impacts to habitat.	D/Q	Indirect	Impervious Surfaces	POS	2	3	2	7	7
12	LDC	RS-9 (U) MD Residential	3.5.40	Open Space Requirements	Minimum 40% of lot area must be developed as permanent open space. A portion of the open space (10% of lot area) must be outdoor living area that includes screening.	1 - Impervious surfaces increase the rate of runoff, concentrate pollutants, and interfere with groundwater recharge. The open space requirement helps ensure that a portion of the site is covered with more porous material, which reduces runoff. 10(a) - Positive: Medium-density residential development might otherwise be nearly 100% impervious. 11(b) - Reach: The standard applies only within the specified zone. 12(c) - Chronic: The development standard will persist for years once established. 13(d) - Low: Benefits to habitat are marginal because open space may include sidewalks and patio areas.	D/Q	Indirect	Impervious Surfaces	POS	2	3	1	6	6

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LI	DOC	Chapter Name	Sect #	Sect. Name	Description	Discussion/Justification	Filter	Impact	Pathway/Conveyance	+/-0 (a)	Mag. (b)	Dur. (c)	Int. (d)	ST	Tot.
13	LDC	RS-12 M-HD Residential	3.6.20	Permitted Uses	Medium-density residential and civic uses are permitted. Conditional uses for this zone are also included in this pathway. <u>Indicators:</u> Horticulture (personal); tree, row, and field crops (personal); off-street parking	1 - Contaminants associated with residential uses include land application of horticultural chemicals and fertilizers and use of cleaners, solvents, oil-s, and sealants for incidental maintenance and repairs to structures and vehicles. Some contaminants will be absorbed by plants or soil-s, some will run off into storm sewers or waterways, and some will seep into the aquifer, eventually resurfacing in lakes or streams. 10(a) - Negative: Land uses and activities are a source of contaminants. 11(b) - Reach: Land uses and activities only apply within the specified zone. 12(c) - Chronic: Land uses and activities persist for years as a source of contaminants. 13(d) - Low: Little harm to habitat occurs because small quantities of contaminants are released in low concentrations. Stormwater is treated for quality and quantity by the City.	D/N	Indirect	Contaminants	NEG	2	3	1	6	6
14	LDC	RS-12 M-HD Residential	3.6.30	Development Standards	Density and minimum lot size establish density of development that can occur within the zone. Small-lot (medium-density) subdivisions typically result in more impervious surface and fewer yard and garden areas than found in low-density residential areas. RS-12 has a maximum lot coverage of 60%, which directly regulates impervious surfaces such as the building footprint, parking lots, and driveways. <u>Indicators:</u> Density: 12-20 DU/acre; min. lot area = 2,200 SF per dwelling, max. lot coverage is 60% of lot area	1 - Impervious surfaces increase the rate of runoff, concentrate pollutants, and interfere with groundwater recharge. The maximum lot coverage standard of 60% ensures that a portion of the site surface will consist of more porous material. This standard will reduce "flash" effects of stormwater and increase percolation rates. 10(a) - Positive: Maximum lot coverage establishes a 60% limit to the most prevalent impervious surfaces. 11(b) - Reach: Development standards apply only within the specified zone. 12(c) - Chronic: Development standards persist once established. 13(d) - Moderate: Maximum lot coverage directly controls impervious surfaces and should significantly reduce impacts to habitat.	D/Q	Indirect	Impervious Surfaces	POS	2	3	2	7	7
15	LDC	RS-12 M-HD Residential	3.6.40	Open Area, Landscaping, and Screening	Minimum 40% of lot area developed as permanent open space with landscaping Up to 200 SF per unit of private (covered) open space, such as patios and balconies, can be developed and counted as 400 SF (2 for 1) against the open space requirement.	1 - Impervious surfaces increase the rate of runoff, concentrate pollutants, and interfere with groundwater recharge. The minimum open space standard ensures that at least some of the site development will consist of more porous material. This standard will reduce "flash" effects of stormwater and increase percolation rates. 10(a) - Positive: Medium- to high-density residential development might otherwise be 100% impervious. 11(b) - Reach: The development standard only applies within the specified zone. 12(c) - Chronic: The development standard will persist for years once established. 13(d) - Low: Benefits to habitat are marginal because open space may include sidewalks and patio areas.	D/N	Indirect	Impervious Surfaces	POS	2	3	1	6	6

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LI	DOC	Chapter Name	Sect #	Sect. Name	Description	Discussion/Justification	Filter	Impact	Pathway/Conveyance	+/-0 (a)	Mag. (b)	Dur. (c)	Int. (d)	ST	Tot.
16	LDC	RS-12(U) M-HD Residential	3.7.20	Permitted Uses	Medium-density residential and civic uses are permitted. Conditional uses for this zone are also included in this pathway. <u>Indicators:</u> Horticulture (personal); tree, row, and field crops (personal); off-street parking	1 - Contaminants associated with residential uses include land application of horticultural chemicals and fertilizers and use of cleaners, solvents, oil-s, and sealants for incidental maintenance and repairs to structures and vehicles. Some contaminants will be absorbed by plants or soil-s, some will run off into storm sewers or waterways, and some will seep into the aquifer, eventually resurfacing in lakes or streams. 10(a) - Negative: Land uses and activities are a source of contaminants. 11(b) - Reach: Land uses and activities only apply within the specified zone. 12(c) - Chronic: Land uses and activities persist for years as a source of contaminants. 13(d) - Low: Little harm to habitat occurs because small quantities of contaminants are released in low concentrations. Stormwater is treated for quality and quantity by the City.	D/N	Indirect	Contaminants	NEG	2	3	1	6	6
17	LDC	RS-12(U) M-HD Residential	3.7.30	Development Standards	Density and minimum lot size establish density of development that can occur within the zone. RS-12(U) has a maximum lot coverage of 60%, which directly regulates impervious surfaces such as the building footprint, parking lots, and driveways. <u>Indicators:</u> Density: 12-20 DU/acre; min. lot area = 2,200 SF per dwelling, max. lot coverage is 60% of lot area	1 - Impervious surfaces increase the rate of runoff, concentrate pollutants, and interfere with groundwater recharge. The maximum lot coverage standard of 60% ensures that a portion of the site surface will consist of more porous material. This standard helps reduce "flash" effects of stormwater and increase percolation rates. 10(a) - Positive: Maximum lot coverage establishes a 60% limit to the most prevalent impervious surfaces. 11(b) - Reach: Development standards apply only within the specified zone. 12(c) - Chronic: Development standards persist once established. 13(d) - Moderate: Maximum lot coverage directly controls impervious surfaces and should significantly reduce impacts to habitat.	D/Q	Indirect	Impervious Surfaces	POS	2	3	2	7	7
18	LDC	RS-12(U) M-HD Residential	3.7.40	Open Area, Landscaping, and Screening	Minimum 40% of lot area developed as permanent open space with landscaping. Up to 200 SF per unit of private (covered) open space, such as patios and balconies, can be developed and counted as 400 SF (2 for 1) against the open space requirement.	1 - The minimum open space standard ensures that at least some of the site development will consist of more porous material. Impervious surfaces increase the rate of runoff, concentrate pollutants, and interfere with groundwater recharge. This standard helps reduce "flash" effects of stormwater and increase percolation rates. 10(a) - Positive: Medium- to high-density residential development might otherwise be 100% impervious. 11(b) - Reach: The standard only applies within the specified zone. 12(c) - Chronic: Once established the standard will persist for years. 13(d) - Low: Benefits to habitat are marginal because open space may include sidewalks and patio areas.	D/N	Indirect	Impervious Surfaces	POS	2	3	1	6	6

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19	LDC	RS-20 HD Residential	3.8.20	Permitted Uses	High-intensity residential and civic uses are permitted. Conditional uses for this zone are also included in this pathway. <u>Indicators:</u> Horticulture (personal); tree, row, and field crops (personal); off-street parking	1 - Contaminants associated with residential uses include land application of horticultural chemicals and fertilizers and use of cleaners, solvents, oil-s, and sealants for incidental maintenance and repairs to structures and vehicles. Some contaminants will be absorbed by plants or soil-s, some will run off into storm sewers or waterways, and some will seep into the aquifer, eventually resurfacing in lakes or streams. 10(a) - Negative: Land uses and activities are a source of contaminants. 11(b) - Reach: Land uses and activities only apply within the specified zone. 12(c) - Chronic: Land uses and activities persist for years as a source of contaminants. 13(d) - Low: Little harm to habitat occurs because small quantities of contaminants are released in low concentrations. Stormwater is treated for quality and quantity by the City.	D/N	Indirect	Contaminants	NEG	2	3	1	6	6
20	LDC	RS-20 HD Residential	3.8.30	Development Standards	Density and maximum lot coverage restrict the amount of impervious surface. "Coverage" includes buildings, parking, and circulation. <u>Indicators:</u> >20 DU/acre; min. lot area = 10,000 SF; max. lot coverage 75%	1 - The maximum lot coverage standard of 75% allows for a portion of what remains to be surfaced with porous material. Impervious surfaces increase the rate of runoff, concentrate pollutants, and interfere with groundwater recharge. The minimum open space standard ensures that at least some of the site development will consist of more porous material. 10(a) - Positive: High-density residential development might otherwise be 100% impervious. 11(b) - Reach: The development standard applies only within the specified zone. 12(c) - Chronic: The development standard persists for years once established. 13(d) - Low: Little harm to habitat occurs because most runoff is captured by CSO and treated for quality and volume.	D/Q	Indirect	Impervious Surfaces	POS	2	3	1	6	6
21	LDC	RS-20 HD Residential	3.8.40	Open Area, Landscaping, and Screening	Minimum 25% of lot area developed as permanent open space with landscaping. Up to 200 SF per unit of private (covered) open space, such as patios and balconies, can be developed and counted as 400 SF (2 for 1) against the open space requirement.	1 - Impervious surfaces increase the rate of runoff, concentrate pollutants, and interfere with groundwater recharge. Maximum lot coverage of 75% allows at least a portion of what remains to be surfaced with porous material. This standard helps reduce "flash" effects of stormwater and increase percolation rates. 10(a) - Positive: High-density residential development might otherwise be 100% impervious. 11(b) - Reach: Uses and activities only apply within the specified zone. 12(c) - Chronic: Land uses and activities persist for years. 13(d) - Low: Benefits to habitat are marginal because open space may include sidewalks and patio areas.	C/N	Indirect	Impervious Surfaces	POS	2	3	1	6	6

PATHWAY ANALYSIS - ZONING DISTRICTS

Line Item Reference	Document ID	Enter relevant data directly from development code			Summary and description of relevant indicators (uses, activity, or standards) impacting habitat	Formatted Response to two key questions: 1) What is the relationship between the source use or activity, the pathway, and the habitat? 2) What is the rationale for scoring this specific pathway for the following parameters: +/-/0 (Col.10 a), Mag.(Col.11 b), Dur. (Col.12 c), Intensity (Col.13 d)?		Direct	Channelization	Impact to PFC POS - Positive NEG - Negative NTRL - Neutral	Magnitude	Duration	Intensity (Impact to Habitat)	Subtotal	Total Score
							Def./Quant.	Direct	Barriers						
							Def./NonQ	Direct	Buffers						
							Cond/Q.	Indirect	Contaminants						
							Cond/NQ	Indirect	Impervious Surfaces						
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
LI	DOC	Chapter Name	Sect #	Sect. Name	Description	Discussion/Justification	Filter	Impact	Pathway/Conveyance	+/-/0 (a)	Mag. (b)	Dur. (c)	Int. (d)	ST	Tot.
22	LDC	CS (Community Shopping)	3.14.20	Permitted Uses	Civic uses and most commercial uses are permitted. Conditional uses for this zone are also included in this pathway. <u>Indicators:</u> Automotive and light equipment cleaning, repairing, sales, and rental; fuel sales; laundry services; major services and utilities	1 - Sources of contaminants include petroleum-based fuels and oil-s released from operation, maintenance, and repairs to vehicles and equipment, and released from fuel sales; and solvents, cleansers, and chemicals released from laundry and dry-cleaning establishments. Releases occur into the air and incidental spills onto paved surfaces during day-to-day operations. Surface- and air-borne contaminants are then conveyed by rainfall into surface and groundwater, resulting in habitat damage. 10(a) - Negative: Uses and activities are a source of contaminants. 11(b) - Reach: Uses and activities only apply within the specified zone. 12(c) - Chronic: Land uses and activities persist for years as a source of contaminants. 13(d) - Medium: Harm to habitat is moderate because of the quantities and kinds of contaminants associated with this pathway.	D/N	Indirect	Contaminants	NEG	2	3	2	7	7
23	LDC	CS (Community Shopping)	3.14.30	Development Standards	No maximum lot coverage or limit on impervious surface Min. lot area = 43,560 SF	1 - A minimum lot size of one acre is specified, but no standard to limit lot coverage or impervious surface exists. Site development typically approaches 100% impervious surfaces. A connection exists between this code section and habitat, because CS-type development has a very high amount of impervious surface. Impervious surfaces increase the rate of runoff, concentrate pollutants, and prevent groundwater recharge. 10(a) - Neutral: Since there is no standard controlling impervious surface in this section of code, it is neutral. 11(b) - Reach: The development standard only applies within the specified zone. 12(c) - Chronic: The development standard will persist for years once established. 13(d) - High: Large areas zoned CS within a basin would result in long-term impacts along a given reach.	D/Q	Indirect	Impervious Surfaces	NTRL	0	0	0	0	0
24	LDC	CS (Community Shopping)	3.14.30.03	Landscaping and Screening	Boundaries abutting streets or residential district must have a minimum 15-foot irrigated, landscape buffer, including a mixture of trees, shrubs, and groundcover. The landscape buffer can be interrupted by driveways and walkways.	1 - The landscape buffer requires some portion of the site to remain porous. The buffer slightly reduces runoff, slightly increases rates of percolation, and slightly reduces the impact of development to stream habitat. Irrigation will also marginally increase the rate of aquifer recharge. 10(a) - Positive: High-density CS development might otherwise be 100% impervious. 11(b) - Reach: Uses and activities only apply within the specified zone. 12(c) - Chronic: Land uses and activities persist for years. 13(d) - Low: Benefits to habitat are marginal because the landscape buffers only apply under certain conditions and to a limited portion of the site.	D/Q	Indirect	Impervious Surfaces	POS	2	3	1	6	6

PATHWAY ANALYSIS - ZONING DISTRICTS

Line Item Reference	Document ID	Enter relevant data directly from development code			Summary and description of relevant indicators (uses, activity, or standards) impacting habitat	Formatted Response to two key questions: 1) What is the relationship between the source use or activity, the pathway, and the habitat? 2) What is the rationale for scoring this specific pathway for the following parameters: +/-/0 (Col.10 a), Mag.(Col.11 b), Dur. (Col.12 c), Intensity (Col.13 d)?		Direct	Channelization	Impact to PFC POS - Positive NEG - Negative NTRL - Neutral	Magnitude City=3 Reach=2 Point=1	Duration Chronic=3 Episodic=2 Once =1	Intensity (Impact to Habitat) High=3 Medium=2 Low=1	Subtotal	Total Score
							Def./Quant.	Direct	Barriers						
							Def./NonQ	Direct	Buffers						
							Cond/Q.	Indirect	Contaminants						
							Cond/NQ	Indirect	Impervious Surfaces						
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
LI	DOC	Chapter Name	Sect #	Sect. Name	Description	Discussion/Justification	Filter	Impact	Pathway/Conveyance	+/-/0 (a)	Mag. (b)	Dur. (c)	Int. (d)	ST	Tot.
25	LDC	MUC (Mixed Use Commercial)	3.20.30	Permitted Uses	Mixed Use (commercial, civic, residential) The MUC zone must be established on a site-by-site basis on commercially zoned property. <u>Indicators:</u> Laundry services; major services and utilities	1 - Sources of contaminants or indicator uses include laundry services: operation of laundry and dry-cleaning services that release cleansers and solvents into the ground and air. Rainfall and surface flow wash the contaminants into storm sewers or waterways, eventually reaching instream habitat. 10(a) - Positive: The MUC zone replaces commercial zoning in a highly urban setting. A mixture of residential, civic, and commercial uses is likely to produce fewer contaminants than 100% commercial development. Benefits to habitat are marginal, but positive nonetheless. 11(b) - Point: The MUC zone must be established on a case-by-case basis on land already zoned commercial. 12(c) - Chronic: Land uses and activities persist for years as a source of contaminants. 13(d) - Low: Reduction in contaminants when compared to base commercial zoning is marginal, as is the benefit to habitat.	C/N	Indirect	Contaminants	POS	1	3	1	5	5
26	LDC	MUC (Mixed Use Commercial)	3.20.30.02	Special Development -- Uses allowed through Discretionary Review	This section allows a number of more intensive land uses and activities as conditional uses. <u>Indicators:</u> Automotive and equipment cleaning, repairing, sales, and rental; fuel sales; and major services and utilities	1 - Sources of contaminants include petroleum-based fuels and oils released from operation, maintenance, and repairs to vehicles and equipment; petroleum-based fuels and oils released from fuel sales; and solvents, cleansers, and chemicals released from laundry and dry-cleaning establishments. Releases occur into the air and incidental spills onto paved surfaces during day-to-day operations. Surface- and air-borne contaminants are then conveyed by rainfall into surface and groundwater, resulting in habitat damage. 10(a) - Negative: These special development uses increase the potential impact to stream habitat compared with the permitted uses of the MUC zone. 11(b) - Point: The conditions of the mixed use district must be established on a site-by-site basis. 12(c) - Chronic: Land uses and activities persist for years as a source of contaminants. 13(d) - Medium: Harm to habitat is moderate because of the quantities and kinds of contaminants associated with this pathway.	C/N	Indirect	Contaminants	NEG	1	3	2	6	6
27	LDC	MUC (Mixed Use Commercial)	3.20.40.04	Open Space Standards	A minimum of 20% of the total site area shall be retained as open space. Open space includes landscaped areas, natural areas, and/or pedestrian amenities. Structures, parking, and interior parking drives are excluded.	1 - Impervious surfaces increase the rate of runoff, concentrate pollutants, and interfere with groundwater recharge. The 20% open space minimum requires some portion of the site to remain porous. The requirement slightly reduces runoff, slightly increases rates of percolation, and slightly reduces the impact of development to stream habitat. 10(a) - Positive: Site development might otherwise be 100% impervious. 11(b) - Point: MUC standards only apply within the established zone. 12(c) - Chronic: Development based on the standard will persist for years. 13(d) - Low: Benefits to habitat are marginal because the standard only applies under certain conditions and to a limited portion of the site.	D/N	Indirect	Impervious Surfaces	POS	2	3	1	6	6

PATHWAY ANALYSIS - ZONING DISTRICTS

Line Item Reference	Document ID	Enter relevant data directly from development code			Summary and description of relevant indicators (uses, activity, or standards) impacting habitat	Formatted Response to two key questions: 1) What is the relationship between the source use or activity, the pathway, and the habitat? 2) What is the rationale for scoring this specific pathway for the following parameters: +/-0 (Col.10 a), Mag.(Col.11 b), Dur. (Col.12 c), Intensity (Col.13 d)?		Direct	Channelization	Impact to PFC POS - Positive NEG - Negative NTRL - Neutral	Magnitude	Duration	Intensity (Impact to Habitat)	Subtotal	Total Score
							Def./Quant.	Direct	Barriers						
							Def./NonQ	Direct	Buffers						
							Cond/Q.	Indirect	Contaminants						
							Cond/NQ	Indirect	Impervious Surfaces						
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
LI	DOC	Chapter Name	Sect #	Sect. Name	Description	Discussion/Justification	Filter	Impact	Pathway/Conveyance	+/-0 (a)	Mag. (b)	Dur. (c)	Int. (d)	ST	Tot.
28	LDC	MUC (Mixed Use Commercial)	3.20.50.05	Landscaping and Screening	Street trees are required. Tree preservation incentives may be granted (to reduce the number of required street trees). Irrigation is required.	1 - Requiring street trees and providing incentives for tree preservation reduces impervious surface along city streets and creates undisturbed areas where trees are preserved. Trees reduce runoff by consuming stormwater and promoting percolation. Irrigation marginally increases percolation rates. Reductions in impervious surfaces and landscape plantings increase percolation rates, reduce stormwater "flashes," and improve aquifer recharge by helping maintain bank flow into stream habitat. 10(a) - Positive: Trees and irrigation help rebalance the water cycle in an urbanized setting. 11(b) - Point: The MUC zone is only established in specific cases. 12(c) - Chronic: Trees and irrigation persist for years. 13(d) - Low: Reduction to impervious surfaces and improved percolation rates are minimal.	D/N	Indirect	Impervious Surfaces	POS	1	3	1	5	5
29	LDC	MUC (Mixed Use Commercial)	3.20.50.07	Pedestrian Amenities	The number of pedestrian amenities is based on structure size. Amenities include wider sidewalks (-), pocket parks (+), plazas (-), tree preservation or planting larger street trees (+), among other neutral options. Some amenities are eligible to be counted as credits against open space or maximum 20-foot setback standards.	1 - A connection to habitat exists because the amenities listed have the potential to increase or decrease impervious surfaces and thereby influence the runoff and aquifer recharge regime. 10(a) - Neutral: As written, the cumulative effect of this section is uncertain. Positive, negative, or neutral results are all possible. 11(b) - NA 12(c) - NA 13(d) - NA	C/N	Indirect	Impervious Surfaces	NTRL	0	0	0	0	0
30	LDC	MUC (Mixed Use Commercial)	3.20.50.09	Neighborhood Compatibility	Adjacent to residential or industrial districts, site design shall preserve healthy, mature trees to the maximum extent practicable. If residential uses are adjacent to industrial districts, a 20-foot landscape screen is required.	1 - Tree preservation reduces impervious surfaces and creates undisturbed areas where trees are preserved. Landscape plantings reduce impervious surfaces, consume stormwater, and promote percolation. Reductions in impervious surfaces and landscape plantings increase percolation rates, reduce stormwater "flashes," and improve aquifer recharge by helping maintain bank flow into stream habitat. 10(a) - Positive: Trees and landscaped areas help rebalance the water cycle in an urbanized setting. 11(b) - Point: The MUC zone is only established in specific cases. 12(c) - Chronic: Trees and landscaped areas persist for years. 13(d) - Low: Reduction to impervious surfaces and improved percolation rates are minimal.	C/N	Indirect	Impervious Surfaces	POS	1	3	1	5	5

PATHWAY ANALYSIS - ZONING DISTRICTS

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							Def./NonQ	Direct	Buffers						
							Cond/Q.	Indirect	Contaminants						
							Cond/NQ	Indirect	Impervious Surfaces						
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
LI	DOC	Chapter Name	Sect #	Sect. Name	Description	Discussion/Justification	Filter	Impact	Pathway/Conveyance	+/-0 (a)	Mag. (b)	Dur. (c)	Int. (d)	ST	Tot.
31	LDC	GI (General Industrial)	3.24.20	Permitted Uses	Industrial uses are permitted. Conditional uses for this zone are also included in this pathway. Indicators: Agricultural services; automotive and equipment fleet storage, heavy equipment sales, rentals, and repairs; laundry services; scrap operations; general industrial uses; explosive or fuel storage; major services and utilities	1 - Sources of contaminants for indicator uses include agricultural chemicals and agricultural materials; petroleum-based fuels and oils released from operation, maintenance, and repairs to vehicles and equipment and released from fuel storage facilities; and solvents, cleansers, and chemicals released from laundry and dry-cleaning establishments. Releases occur into the air and incidental spills onto paved surfaces during day-to-day operations. Surface- and air-borne contaminants are then conveyed by rainfall into surface and groundwater resulting in habitat damage. 10(a) - Negative: Land uses and activities are a source of contaminants. 11(b) - Reach: Land uses and activities only apply within the specified zone. 12(c) - Chronic: Land uses and activities persist for years as a source of contaminants. 13(d) - High: Contaminants have the potential to produce long-term harm to habitat because of quantities and kinds of contaminants associated with this pathway.	D/N	Indirect	Contaminants	NEG	2	3	3	8	8
32	LDC	GI (General Industrial)	3.24.30.02	Setbacks	A 100-foot setback to buildings or industrial activities is required that includes a 35-foot landscape buffer where abutting residential, agricultural, open space, or greenway districts. The 35-foot buffer also applies to street setbacks.	1 - Impervious surfaces increase the rate of runoff, concentrate pollutants, and interfere with groundwater recharge. The landscape buffer requires some portion of the site to remain porous. The buffer slightly reduces runoff, slightly increases rates of percolation, and slightly reduces the impact of development to stream habitat. 10(a) - Positive: Site development might otherwise be 100% impervious. 11(b) - Reach: The development standard only applies within the specified zone. 12(c) - Chronic: The development standard will persist for years once established. 13(d) - Low: Benefits to habitat are marginal because the landscape buffers only apply under certain conditions and to a limited portion of the site.	D/Q	Indirect	Impervious Surfaces	POS	2	3	1	6	6
33	LDC	GI (General Industrial)	3.24.30.03	Landscaping and Screening	Specifies a combination of trees, shrubs, and groundcover must be used in landscaped areas. Where a site abuts a residential district landscaping must be at least 6 feet in height and 80% opaque.	1 - Trees and shrubs reduce impervious surfaces, consume stormwater, and promote percolation. Reductions in impervious surfaces and increased percolation rates reduce stormwater "flashes" and improve aquifer recharge by helping maintain bank flow into stream habitat. 10(a) - Positive: Trees and landscaped areas help rebalance the water cycle in an urbanized setting. 11(b) - Point: The GI zone is only established as a conditional use in specific cases. 12(c) - Chronic: Trees and landscaped areas persist for years. 13(d) - Low: Reduction to impervious surfaces and improved percolation rates are slight.	D/N	Indirect	Impervious Surfaces	POS	1	3	1	5	5

PATHWAY ANALYSIS - ZONING DISTRICTS

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							Def./NonQ	Direct	Buffers						
							Cond/Q.	Indirect	Contaminants						
							Cond/NQ	Indirect	Impervious Surfaces						
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
LI	DOC	Chapter Name	Sect #	Sect. Name	Description	Discussion/Justification	Filter	Impact	Pathway/Conveyance	+/-0 (a)	Mag. (b)	Dur. (c)	Int. (d)	ST	Tot.
34	LDC	II (Intensive Industrial)	3.25.20.01	Permitted Uses	Industrial uses are permitted. Indicators: Agricultural services; automotive and equipment fleet storage, heavy equipment sales, rentals, and repairs; laundry services; scrap operations; general industrial uses; explosive or fuel storage; major services and utilities	1 - Sources of contaminants include agricultural chemicals and agricultural materials; petroleum-based fuels and oils released from operation, maintenance, and repairs to vehicles and equipment, and from fuel storage facilities; and solvents, cleansers, and chemicals released from laundry and dry cleaning establishments. Releases occur into the air and incidental spills onto paved surfaces during day-to-day operations. Surface- and air-borne contaminants are then conveyed by rainfall into surface and groundwater, resulting in habitat damage. 10(a) - Negative: Land uses and activities are a source of contaminants. 11(b) - Reach: Land uses and activities only apply within the specified zone. 12(c) - Chronic: Land uses and activities persist for years as a source of contaminants. 13(d) - High: Contaminants have the potential to produce long-term harm to habitat because of the quantities and kinds of contaminants associated with this pathway.	D/N	Indirect	Contaminants	NEG	2	3	3	8	8
35	LDC	II (Intensive Industrial)	3.25.20.01	Conditional Uses	Intensive Industrial Indicators: Intensive industrial uses, explosives or fuels storage	1 - Sources of contaminants for indicator uses include agricultural chemicals and agricultural materials; petroleum-based fuels and oils released from operation, maintenance, and repairs to vehicles and equipment, and from fuel storage facilities; and solvents, cleansers, and chemicals released from laundry and dry-cleaning establishments. Releases occur into the air and incidental spills onto paved surfaces during day-to-day operations. Surface- and air-borne contaminants are then conveyed by rainfall into surface and groundwater, resulting in habitat damage. 10(a) - Negative: Land uses and activities are a source of contaminants. 11(b) - Point: Conditional land uses and activities must be established on a site-by-site basis. 12(c) - Chronic: Land uses and activities persist for years as a source of contaminants. 13(d) - High: Contaminants have the potential to produce long-term harm to habitat because of the quantities and kinds of contaminants associated with this pathway.	C/N	Indirect	Contaminants	NEG	1	3	3	7	7
36	LDC	II (Intensive Industrial)	3.25.30.02	Setbacks	A 100-foot setback to buildings or industrial activities is required that includes a 35-foot landscape buffer where abutting residential, agricultural, open space, or greenway The 35-foot buffer also applies to street setbacks.	1 - Impervious surfaces increase the rate of runoff, concentrate pollutants, and interfere with groundwater recharge. The landscape buffer requires some portion of the site to remain porous. The buffer slightly reduces runoff, slightly increases rates of percolation, and slightly reduces the impact of development to stream habitat. 10(a) - Positive: Site development might otherwise be 100% impervious. 11(b) - Reach: The standard only applies within the specified zone. 12(c) - Chronic: The standard will persist for years. 13(d) - Low: Benefits to habitat are marginal because the landscape buffers only apply under certain conditions and to a limited portion of the site.	D/Q	Indirect	Impervious Surfaces	POS	2	3	1	6	6

PATHWAY ANALYSIS - ZONING DISTRICTS

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							Def./Quant.	Direct	Barriers						
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							Cond/Q.	Indirect	Contaminants						
							Cond/NQ	Indirect	Impervious Surfaces						
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
LI	DOC	Chapter Name	Sect #	Sect. Name	Description	Discussion/Justification	Filter	Impact	Pathway/Conveyance	+/-0 (a)	Mag. (b)	Dur. (c)	Int. (d)	ST	Tot.
37	LDC	II (Intensive Industrial)	3.25.30.03	Landscaping and Screening	Specifies that a combination of trees, shrubs, and groundcover must be used in landscaped areas. Where a site abuts a residential district landscaping must be at least 6 feet in height and 80% opaque.	1 - Trees and shrubs reduce impervious surfaces, consume stormwater, and promote percolation. Reductions in impervious surfaces and increased percolation rates reduce stormwater "flashes" and improve aquifer recharge by helping maintain bank flow into stream habitat. 10(a) - Positive: Trees and landscaped areas help rebalance the water cycle in an urbanized setting. 11(b) - Reach: The II zone is only established in specific cases. 12(c) - Chronic: Trees and landscaped areas persist for years. 13(d) - Low: Reduction to impervious surfaces and improved percolation rates are slight.	D/N	Indirect	Impervious Surfaces	POS	2	3	1	6	6
38	LDC	MUE (Mixed Use Employment)	3.27.30	Permitted Uses	This District may be applied to properties with industrial designations on the Comprehensive Plan Map. <u>Indicators:</u> Laundry services; wholesaling, storage, and distribution	1 - Sources of contaminants for these indicator uses include solvents, cleansers, and chemicals released from laundry and dry-cleaning establishments; petroleum-based fuels and oils released from operation, maintenance, and repairs to vehicles and equipment associated with wholesaling, storage, and distribution facilities. Releases occur into the air and incidental spills onto paved surfaces during day-to-day operations. Surface- and air-borne contaminants are then conveyed by rainfall into surface and groundwater, resulting in habitat damage. 10(a) - Neutral: These permitted uses may increase or decrease the potential impact to stream habitat compared with the permitted uses of the base zone. 11(b) - Point: The conditions of the mixed use district must be established on a site-by-site basis. 12(c) - Chronic: Land uses and activities persist for years as a source of contaminants. 13(d) - Medium: Harm to habitat is moderate because of the quantities and kinds of contaminants associated with this pathway.	C/N	Indirect	Contaminants	NTRL	0	0	0	0	0
39	LDC	MUE (Mixed Use Employment)	3.27.30.02	Special Development -- Uses allowed through Discretionary Review	This section allows a number of more intensive land uses and activities as conditional uses. <u>Indicators:</u> Automotive and equipment cleaning, repairing, sales, and rental; fuel sales; and major services and utilities	1 - Sources of contaminants for these indicator uses include petroleum-based fuels and oils released from operation, maintenance, and repairs to vehicles and equipment, and from fuel sales facilities; and solvents, cleansers, and chemicals released from laundry and dry-cleaning establishments. Releases occur into the air and incidental spills onto paved surfaces during day-to-day operations. Surface- and air-borne contaminants are then conveyed by rainfall into surface and groundwater, resulting in habitat damage. 10(a) - Negative: Special development uses increase the potential impact to stream habitat compared with the permitted uses of the MUE zone. 11(b) - Point: The conditions of the mixed use district must be established on a site-by-site basis. 12(c) - Chronic: Land uses and activities persist for years as a source of contaminants. 13(d) - Medium: Harm to habitat is moderate because of the quantities and kinds of contaminants associated with this pathway.	C/N	Indirect	Contaminants	NEG	1	3	2	6	6

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							Def./Quant.	Direct	Barriers						
							Def./NonQ	Direct	Buffers						
							Cond/Q.	Indirect	Contaminants						
							Cond/NQ	Indirect	Impervious Surfaces						
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
LI	DOC	Chapter Name	Sect #	Sect. Name	Description	Discussion/Justification	Filter	Impact	Pathway/Conveyance	+/-0 (a)	Mag. (b)	Dur. (c)	Int. (d)	ST	Tot.
40	LDC	MUE (Mixed Use Employment)	3.27.40.01	Preservation of Industrial Land Supply	<p>This section requires a minimum FAR of .4 for all property designated Industrial on the Comprehensive Plan.</p> <p>The section allows some commercial uses to be considered Industrial uses for the purposes of the FAR standard.</p>	<p>1 - The 0.4 FAR development standard establishes a minimum level of land use intensity by requiring industrial/commercial uses within the MUE district. Sources of contaminants within the district can be expected to intensify as well.</p> <p>Contaminants are released into the air and incidental spills occur onto paved surfaces during day-to-day operations. Surface- and air-borne contaminants are then conveyed by rainfall into surface water and groundwater resulting in damage to riparian habitat.</p> <p>10(a) - Negative: The development standard establishes minimum thresholds for intensive land uses and activities. 11(b) - Point: The conditions of the mixed use district must be established on a site-by-site basis. 12(c) - Chronic: Land uses and activities persist for years as a source of contaminants. 13(d) - Medium: Harm to habitat is moderate because of the quantities and kinds of contaminants associated with this pathway.</p>	C/N	Indirect	Contaminants	NEG	1	3	2	6	6
41	LDC	MUE (Mixed Use Employment)	3.27.40.04	Open Space Standards	<p>A minimum of 20% of the total site area shall be retained as open space.</p> <p>Open space includes landscaped areas, natural areas, and/or pedestrian amenities. Structures, parking, and interior parking drives are excluded.</p>	<p>1 - Impervious surfaces increase the rate of runoff, concentrate pollutants, and interfere with groundwater recharge. The 20% minimum open space requires some portion of the site to remain porous. The requirement slightly reduces runoff, slightly increases rates of percolation, and slightly reduces the impact of development to stream habitat.</p> <p>10(a) - Positive: Site development might otherwise be 100% impervious. 11(b) - Point: MUE standards only apply within the established zone. 12(c) - Chronic: Development based on the standard will persists for years. 13(d) - Low: Benefits to habitat are marginal because the standard only applies under certain conditions and to a limited portion of the site.</p>	C/N	Indirect	Impervious Surfaces	POS	1	3	1	5	5
42	LDC	MUE (Mixed Use Employment)	3.27.50.05	Landscaping and Screening	<p>Street trees are required. Tree preservation incentives may be granted (to reduce the number of required street trees). Irrigation is required.</p>	<p>1 - Requiring street trees and providing incentives for tree preservation reduces impervious surface along city streets and creates undisturbed areas when trees are preserved. Trees also consume stormwater and promote percolation. Irrigation marginally increases percolation rates.</p> <p>Reductions in impervious surfaces and increased percolation rates reduce stormwater "flashes" and improve aquifer recharge by helping maintain bank flow into stream habitat.</p> <p>10(a) - Positive: Trees and irrigation help rebalance the water cycle in an urbanized setting. 11(b) - Point: MUE zone is only established in specific cases. 12(c) - Chronic: Trees and irrigation persist for years. 13(d) - Low: Reduction to impervious surfaces and improved percolation rates are minimal.</p>	C/N	Indirect	Impervious Surfaces	POS	1	3	1	5	5

PATHWAY ANALYSIS - ZONING DISTRICTS

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							Def./Quant.	Direct	Barriers						
							Def./NonQ	Direct	Buffers						
							Cond/Q.	Indirect	Contaminants						
							Cond/NQ	Indirect	Impervious Surfaces						
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
LI	DOC	Chapter Name	Sect #	Sect. Name	Description	Discussion/Justification	Filter	Impact	Pathway/Conveyance	+/-0 (a)	Mag. (b)	Dur. (c)	Int. (d)	ST	Tot.
43	LDC	MUE (Mixed Use Employment)	3.27.50.07	Pedestrian Amenities	The number of pedestrian amenities is based on structure size. Amenities include wider sidewalks (-), pocket parks (+), plazas (-), tree preservation or planting larger street trees (+); among other neutral options. Some amenities are eligible to be counted as credits against open space or maximum 20-foot setback standards.	1 - A connection to habitat exists because the amenities listed have the potential to increase or decrease impervious surface and thereby influence the runoff and aquifer recharge regime. 10(a) - Neutral: As written, the cumulative effect of this section is uncertain. Positive, negative, or neutral results are all possible. 11(b) - NA 12(c) - NA 13(d) - NA	C/N	Indirect	Impervious Surfaces	NTRL	0	0	0	0	0
44	LDC	MUE (Mixed Use Employment)	3.27.50.09	Neighborhood Compatibility	Adjacent to residential or industrial districts, site design shall preserve healthy, mature trees to the maximum extent practicable.	1 - Tree preservation reduces impervious surfaces and creates undisturbed areas when trees are preserved. Reductions in impervious surface and increased percolation rates reduce stormwater "flashes" and improve aquifer recharge by helping maintain bank flow into stream habitat. 10(a) - Positive: Trees and landscaped areas help rebalance the water cycle in an urbanized setting. 11(b) - Point: The MUE zone is only established in specific cases. 12(c) - Chronic: Trees and landscaped areas persist for years. 13(d) - Low: Reduction to impervious surfaces and improved percolation rates are minimal.	C/N	Indirect	Impervious Surfaces	POS	1	3	1	5	5
45	LDC	WRG (Greenway District)	3.30.20	Type I: Conditional Development	Development within the WRG overlay requires conditional approval. "Development" as used in this section includes change of use or intensification of land or water uses except for those activities listed as exemptions in Section 3.30.30 below. "Development" also includes proposed increases in air discharges that require permit approval by the Oregon Department of Environmental Quality (DEQ).	1 - Sources of contaminants for these indicator uses include solvents, cleansers, and chemicals released from laundry and dry-cleaning establishments; and petroleum-based fuels and oils released from operation, maintenance, and repairs to vehicles and equipment associated with wholesaling, storage, and distribution facilities. Releases occur into the air and incidental spills onto paved surfaces during day-to-day operations. Surface- and air-borne contaminants are then conveyed by rainfall into surface and groundwater, resulting in habitat damage. 10(a) - Neutral: These permitted uses may increase or decrease the potential impact to stream habitat compared with the permitted uses of the base zone. 11(b) - Point: The conditions of the mixed use district must be established on a site-by-site basis. 12(c) - Chronic: Land uses and activities persist for years as a source of contaminants. 13(d) - Medium: Harm to habitat is moderate because of the quantities and kinds of contaminants associated with this pathway.	C/N	Direct	Multitple	POS	0	0	0	0	0

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LI	DOC	Chapter Name	Sect #	Sect. Name	Description	Discussion/Justification	Filter	Impact	Pathway/Conveyance	+/-/0 (a)	Mag. (b)	Dur. (c)	Int. (d)	ST	Tot.
46	LDC	WRG (Greenway District)	3.30.30	Exemptions	Exemptions from the Conditional Development requirement of the WRG overlay allow many pathways, including state-permitted dredging/channel maintenance; state-permitted seasonal increases in gravel operations; emergency erosion control operations not requiring a DSL permit; scenic easements/ maintenance; addition/modification by public utilities of lines, wires, fixtures, equipment, circuits, appliances, and conductors; flood emergency procedures and maintenance/repair of flood control facilities; signs, markers, aids, etc. that serve the public; residential accessory development (excluding structures), such as lawns, gardens, and play areas outside the riparian management zone; equipment and material storage; minor repairs/alterations to a structure for which no building permit is required; change of use of a structure that does not affect the land or water upon which it is situated; landscaping; driveway construction; and maintenance/	1 - The exemptions listed provide both direct and indirect pathways or conveyances that have the potential to impact stream habitat. Dredging, channelization, and gravel operations can directly impact stream habitat by increasing erosion and sedimentation and damaging the streambeds suitable for spawning. Removing or pruning trees and shrubs along riparian corridors allowed by exception can damage stream habitat by increasing streambank erosion and increasing water temperature. Land uses and activities exempted by this section are sources of a range of contaminants ranging from horticultural chemicals to petroleum-based oils, fuels, and solvents which, when released, can be carried by surface water or groundwater flows into stream habitat. Land uses and activities exempted from conditional development approval such as construction of driveways and other kinds of development or maintenance can increase the amount of impervious surface within the basin. Impervious surfaces reduce percolation rates, increase storm water "flashes," and raise the water temperature of streams. 10(a) - Negative: Exempt uses and activities may harm stream habitat. 11(b) - Reach: The WRG overlay applies to specific areas within the watershed. 12(c) - Episodic: Most of the activities and land uses listed are episodic. 13(d) - Medium: A wide range of harmful impacts are associated with this section.	D/N	Direct	Multiple	NEG	2	2	2	6	6

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LI	DOC	Chapter Name	Sect #	Sect. Name	Description	Discussion/Justification	Filter	Impact	Pathway/Conveyance	+/-/0 (a)	Mag. (b)	Dur. (c)	Int. (d)	ST	Tot.
47	LDC	WRG (Greenway District)	3.30.40	Review Criteria	b. Significant fish and wildlife habitats shall be protected; d. the quality of air, water, and land resources in the Greenway shall be protected to the maximum extent practicable; e. areas of annual flooding, floodplains, and wetlands shall be protected in their natural state to the maximum extent practicable to maintain their natural, physical, and biological functions; f. the natural vegetative fringe along the river shall be protected and enhanced to the maximum extent practicable to assure scenic quality, protection of wildlife, protection from erosion, and screening of uses from the river; i. extraction of aggregate deposits shall be conducted in a manner designed to minimize adverse effects on water quality, fish and wildlife, vegetation, bank stabilization, stream flow, visual quality, noise and safety, and to guarantee necessary reclamation; j. development, change, or intensification of use shall provide the maximum possible landscaped area, open space, or vegetation between the activity and the river; and k. development	1 - The review criteria listed are associated with multiple pathways or conveyances that have the potential to protect stream habitat. Item b. states habitat shall be protected, but lacks qualitative measure. Protection of habitat hinges on interpretation of "maximum extent practicable" for items d, e, and f. Extraction of aggregates is required only to "minimize adverse impacts." 10(a) - Positive: The review criteria are intended to broadly protect natural resources. 11(b) - Reach: The WRG overlay applies to specific areas within the watershed. 12(c) - Chronic: The review criteria persist unless amended. 13(d) - High: The criteria provide a high degree of protection when strictly interpreted, implemented, and enforced..	C/N	Direct	Multiple	POS	2	3	3	8	8
48	LDC	WRG (Greenway District)	3.30.50 (a)	Site Modifications	Protects topography and permits disturbance for construction of water-related or water-dependent uses, erosion, and hazard reduction. Protects streambank stability. Minimizes hydraulic threats and disturbance to hydrology. Minimizes impacts to riparian environment.	1 - Site modification standards are intended to minimize impacts to the hydrology of the waterway and to the riparian environment. Site disturbances can contribute to erosion and sedimentation that impacts water quality and riverbed habitat. Site disturbances also can remove vegetation that shades stream habitat and moderates the fluctuation of water temperature. Soil and vegetation filter some contaminants from surface water and groundwater, improving water quality before affecting habitat. Permitted disturbances have the potential to create an array of other contaminants and pathways that may impact stream habitat. 10(a) - Positive: Overall, the site modification standards of the WRG overlay reduce harmful impacts to stream habitat. 11(b) - Reach: The WRG site modification standards apply to specific areas within the watershed. 12(c) - Chronic: The standards will persist until amended. 13(d) - High: Reducing site modification within the WRG overlay provides a high degree of protection for stream habitat.	C/N	Direct	Multiple	POS	2	3	3	8	8

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LI	DOC	Chapter Name	Sect #	Sect. Name	Description	Discussion/Justification	Filter	Impact	Pathway/Conveyance	+/-/0 (a)	Mag. (b)	Dur. (c)	Int. (d)	ST	Tot.
49	LDC	WRG (Greenway District)	3.30.50 (b)	Riparian Vegetation	Riparian vegetation is protected. If it is removed, it must be replaced with compatible indigenous vegetation. Trees of 8 inches in diameter or greater (measured at 4 feet above grade) shall not be removed except (a) where necessary as approved by the Planning Commission to accommodate a water-related or water--dependent use, or (b) where the tree is determined by the Park and Recreation Services Manager to be hazardous.	1 - Riparian vegetation standards are intended to minimize impacts from construction to the riparian environment. Riparian vegetation protection benefits water quality and riverbed habitat. Soil erosion is minimized and streambanks are stabilized when left undisturbed or when vegetation is promptly re-established. Maintaining vegetative cover also helps shade stream habitat and stabilize water temperature regimes. 10(a) - Positive: The riparian vegetation standards of the WRG overlay reduce harmful impacts to stream habitat. 11(b) - Reach: The WRG riparian vegetation standards apply to specific areas within the watershed. 12(c) - Chronic: The standards persist until amended. 13(d) - High: Protecting riparian vegetation within the WRG overlay provides a high degree of protection for stream habitat.	C/N	Direct	Buffer	POS	2	3	3	8	8
50	LDC	WRG (Greenway District)	3.30.50 (c)	Landscaping	1. All areas of the site within the WRG District shall be landscaped except the following: a. areas covered by a structure, parking, driveways, or other permitted use; b. areas requiring stabilization methods other than landscaping, which stabilization shall be designed so as not to contribute to future instability of the bank, both on the site and on adjacent properties; and c. areas maintained in natural vegetation. 2. Required landscaped areas shall be continuously maintained, irrigated with permanent facilities sufficient to maintain the plant material, and covered by living plant material capable of attaining 90% ground coverage within three years. 3. Living plant materials shall be compatible with and enhance the riparian environment.	1 - Landscape standards help prevent soil erosion and stabilize streambanks. Maintaining vegetative cover also helps shade stream habitat and stabilize water temperature regimes. Soil and vegetation filter some contaminants from surface water and groundwater, improving water quality before affecting habitat. 10(a) - Positive: The landscape standards of the WRG overlay reduce harmful impacts to stream habitat. 11(b) - Reach: The WRG landscape standards apply to specific areas within the watershed. 12(c) - Chronic: The standards will persist until amended. 13(d) - High: Establishing vegetative cover within the WRG overlay provides important protection for stream habitat.	C/N	Direct	Buffer	POS	2	3	3	8	8

PATHWAY ANALYSIS - ZONING DISTRICTS

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LI	DOC	Chapter Name	Sect #	Sect. Name	Description	Discussion/Justification	Filter	Impact	Pathway/Conveyance	+/-/0 (a)	Mag. (b)	Dur. (c)	Int. (d)	ST	Tot.
51	LDC	WRG (Greenway District)	3.30.50 (g)	Greenway Setback	Minimum building setback distances from the ordinary high water line of the Willamette River as are follows: -Lands in the WRG from the northern City limits to the southern edge of 777 NE Second Street (Assessor Map No. 11-5-35AD, Tax Lot 3000) --20 feet westerly from top-of-bank; -Lands in the WRG from the southern edge of 777 NE Second Street (Assessor Map No. 11-5-35AD, Tax Lot 3000) to Harrison Street--50 feet; -Lands in the WRG between Harrison Street and "B" Street, at the top of the riverbank including the existing bike path--a landscaping strip sufficient to separate the bikepath is required; and - Lands in the WRG south of "B" Street to the southerly City limits--100 feet. Setback distances do not apply to water-dependent uses that require a riverbank location or water-related uses that require direct access to the river.	1 - Greenway setback standards are intended to minimize impacts from buildings and land activities to the riparian environment. Riparian vegetation protection benefits water quality and riverbed habitat. Soil erosion is minimized and streambanks are stabilized when left undisturbed or when vegetation is promptly re-established. Maintaining vegetative cover also helps stabilize water temperature regimes of habitat. Soil and vegetation filter some contaminants from surface water and groundwater, improving water quality before affecting habitat. 10(a) - Positive: The Greenway setback standards of the WRG overlay reduce harmful impacts to stream habitat. 11(b) - Reach: The Greenway setback standards apply to specific areas within the watershed. 12(c) - Chronic: The standards will persist until amended. 13(d) - High: Greenway setback standards within the WRG overlay provide a high degree of protection for stream habitat.	C/Q	Direct	Buffer	POS	2	3	3	8	8

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LI	DOC	Chapter Name	Sect #	Sect. Name	Description	Discussion/Justification	Filter	Impact	Pathway/Conveyance	+/-/0 (a)	Mag. (b)	Dur. (c)	Int. (d)	ST	Tot.
52	LDC	Improvements Required with Development	4.0.40	Pedestrian Requirements	Sidewalks shall be required along both sides of all arterial, collector, and local streets, as follows: 1. minimum of 5 feet wide on local through streets, minimum of 4 feet wide on cul-de-sacs, tree planting area having at least 6 feet of separation between sidewalk and curb; 2. along arterial and collector streets a planted area having a minimum 12-foot width and landscaped with trees and plant materials, with sidewalks a minimum of 6 feet wide; and 2. ...pedestrian rights-of-way connecting cul-de-sacs or passing through unusually long or oddly shaped blocks a minimum of 15 feet wide. When connections are less than 220 feet long (both the onsite and the offsite portions of the path) and they directly serve 10 or fewer onsite dwellings, the minimum path width is 5 feet.	1 - Pedestrian Requirements require sidewalks for public use, and, therefore, increase the amount of impervious surface. Impervious surfaces increase the rate of runoff, concentrate pollutants, and interfere with groundwater recharge. Much of the runoff from sidewalks will reach the stormwater system; a smaller amount will infiltrate the ground in adjacent landscape areas and lawn areas. 10(a) - Negative: The requirements increase impervious surfaces. 11(b) - City: The requirements apply throughout the City. 12(c) - Chronic: The impervious surfaces will persist for a long period of time. 13(d) - Low: Much of the runoff will be intercepted by the stormwater system.	D/Q	Indirect	Impervious Surfaces	NEG	3	3	1	7	7
53	LDC	Improvements Required with Development	4.4.50	Bicycle Requirements	On-street bike lanes shall be required on all arterial and collector streets and constructed during street improvements. 2. Bicycle/pedestrian rights-of-way connecting cul-de-sacs or passing through long or oddly shaped blocks shall be a minimum of 15 feet wide. 1. 8-foot bike paths should be used where long-term bicycle and pedestrian usage is expected to be relatively low... 2. a standard 10- foot width shall be used for two-way bikepaths. 3. 12-foot bike paths are required for high bicycle volumes or multiple use by bicyclists, pedestrians, and joggers. d. Bicycle facilities...shall be extended through the site to the edge of adjacent property(ies).	1 - This section requires bike lanes for public use, and, therefore, increases the amount of impervious surface. Impervious surfaces increase the rate of runoff, concentrate pollutants, and interfere with groundwater recharge. Most of the runoff from bike lanes will reach the stormwater system; a small amount will infiltrate the ground in adjacent landscape areas and lawn areas. 10(a) - Negative: The requirements increase impervious surfaces. 11(b) - City: The requirements apply throughout the City. 12(c) - Chronic: The impervious surfaces will persist for a long period of time. 13(d) - Low: Most of the runoff will be intercepted by the stormwater system.	C/Q	Indirect	Impervious Surfaces	NEG	3	3	1	7	7

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54	LDC	Improvements Required with Development	4.0.60	Transit Requirements	Development sites located along existing or planned transit routes shall, where appropriate, incorporate bus pull-outs and shelters into the site design (in accordance with the guidelines and standards of the Corvallis Transit System).	1 - This section defines transit requirements for public use, and, therefore, increases the amount of impervious surface. Impervious surfaces increase the rate of runoff, concentrate pollutants, and interfere with groundwater recharge. Nearly all of the runoff from transit facilities will reach the stormwater system; a smaller amount will infiltrate the ground in adjacent landscape areas and lawn areas. 10(a) - Negative: The requirements increase impervious surfaces. 11(b) - City: The requirements apply throughout the City. 12(c) - Chronic: The impervious surfaces will persist for a long period of time. 1(d) - Low: Nearly all of the runoff will be intercepted by the stormwater system.	C/N	Indirect	Impervious Surfaces	NEG	3	3	1	7	7
55	LDC	Improvements Required with Development	4.0.70	Street Requirements	This section defines minimum street standards for development. Stormwater drainage required on temporary dead-ends. Alleys required "in commercial and industrial districts to serve abutting properties unless other permanent provisions are approved by the Planning Commission or Director."	1 - This section defines street requirements for public use, and, therefore, increases the amount of impervious surface. Impervious surfaces increase the rate of runoff, concentrate pollutants, and interfere with groundwater recharge. Nearly all of the runoff from streets will reach the stormwater system; a smaller amount will infiltrate the ground in adjacent landscape areas and lawn areas. 10(a) - Negative: The requirements increase impervious surfaces. 11(b) - City: The requirements apply throughout the City. 12(c) - Chronic: The impervious surfaces will persist for a long period of time. 13(d) - Low: Nearly all of the runoff will be intercepted by the stormwater system.	D/N	Indirect	Impervious Surfaces	NEG	3	3	1	7	7
56	LDC	Improvements Required with Development	4.0.80	Public Utility Extensions	All development shall be served by public water, sanitary sewer, and storm drainage.	1 - This section requires use of public utilities. This requirement precludes local damage to habitat that might be caused by the use of individual septic systems, poorly maintained or operated package treatment plants, or erosion and sedimentation caused by inadequate onsite stormwater management. 10(a) - Positive: Public utilities treat stormwater and wastewater before release into stream habitat. 11(b) - City: The requirements apply throughout the City. 12(c) - Chronic: Public utility service will continue. 13(d) - High: A high level of treatment and management of stormwater and wastewater is highly beneficial to habitat.	D/N	Indirect	Contaminants	POS	3	3	3	9	9

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0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
LI	DOC	Chapter Name	Sect #	Sect. Name	Description	Discussion/Justification	Filter	Impact	Pathway/Conveyance	+/-0 (a)	Mag. (b)	Dur. (c)	Int. (d)	ST	Tot.
57	LDC	Improvements Required with Development	4.0.100	Franchise Utility Installations	All franchise utility distribution facilities installed to serve new development shall be placed underground except that overhead utility distribution lines may be permitted upon approval of the City Engineer when unusual terrain, soil, or other conditions make underground installation impracticable. Location of such overhead utilities shall follow rear or side lot lines wherever feasible.	1 - This section requires franchise utility distribution systems to be placed underground. Trenching can contribute to soil erosion and interrupt the flow of surface water. Excessive sedimentation caused by trenching can damage stream habitat. Trenching may impact stream habitat by altering or diverting surface hydrology. 10(a) - Negative: Trenching disturbs soil and surface water flow. 11(b) - City: The requirements apply throughout the City. 12(c) - Episodic: Duration may vary on a case-by case basis according to site conditions. 13(d) - Low: Impact on habitat is mitigated by erosion control and properly compacting backfill.	C/N	Direct	Contaminants	NEG	3	2	1	6	6
58	LDC	Improvements Required with Development	4.0.110	Land for Public Purposes	Where a development site is traversed by a drainageway or water course, drainageway improvements in accordance with the Corvallis Drainage Master Plan and a drainageway dedication in accordance with the requirements of Chapter 4.5 shall be provided to the City.	1 - The required dedication of drainageways, watercourses, and drainageway improvements implements City drainage plans and stormwater management. The City manages stormwater quality and quantity to protect stream habitat. 10(a) - Positive: The section implements stormwater management. 11(b) - City: The requirements apply throughout the City. 12(c) - Chronic: Dedications and improvements will persist for a long period of time. 13(d) - High: Stormwater management protects stream habitat.	D/N	Direct	Multiple	POS	3	3	3	9	9
59	LDC	Improvements Required with Development	4.0.130	Ponding Areas and Flood Hazard	Areas subject to ponding of surface water or flooding shall not be developed without adequate mitigation. Existence of a ponding area or flood hazard may be cause for revision of the development proposal or denial of the requested development.	1 - The intent of this section is not entirely clear. Mitigation may mean draining ponding areas or ensuring that natural systems continue to function. 10(a) - Neutral: The intent is unclear. 11(b) - City: The requirements apply throughout the City. 12(c) - Chronic: Benefits or impacts are likely to last. 13(d) - Low	C/N	Indirect	Multiple	NTRL	0	0	0	0	0
60	LDC	Parking, Loading, and Access Requirements	4.1.20	General Provisions	Requires additional parking spaces for significant alterations or changes in use. When standards conflict, the greater number of spaces shall apply. Additional space is required for large bedroom size. Fractions of spaces are rounded upwards. A maximum of 30% more parking than minimum off-street parking is allowed. A maximum 10% reduction in required parking is allowed for transit pull-outs and bicycle parking.	1 - This section establishes general provisions for parking. Some portions reduce impervious surfaces, other sections increase impervious surfaces. Impervious surfaces increase the rate of runoff, concentrate pollutants, and interfere with groundwater recharge. Most of the runoff from parking areas will reach the stormwater system, a small amount will infiltrate the ground in adjacent landscape areas and lawn areas. 10(a) - Neutral: The requirement helps manages stormwater and maintains aquifer recharge. 11(b) - City: The requirements apply throughout the City. 12(c) - Chronic: Protection and mitigation measures are intended to be long lasting. 13(d) - Low: stormwater is already managed by the City for quality and quantity, but this section has the potential to protects aquifer recharge too.	C/N	Indirect	Impervious Surfaces	NTRL	0	0	0	0	0

PATHWAY ANALYSIS - ZONING DISTRICTS

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LI	DOC	Chapter Name	Sect #	Sect. Name	Description	Discussion/Justification	Filter	Impact	Pathway/Conveyance	+/-0 (a)	Mag. (b)	Dur. (c)	Int. (d)	ST	Tot.
61	LDC	Parking, Loading, and Access Requirements	4.1.30	Off-street Parking Requirements	Establishes vehicle and bicycle parking requirements by type of use	1 - This section establishes standards for off-street parking, and, therefore, adds to the amount of impervious surface within a development. Impervious surfaces increase the rate of runoff, concentrate pollutants, and interfere with groundwater recharge. Most of the runoff from parking areas will reach the stormwater system; a small amount will infiltrate the ground in adjacent landscape areas and lawn areas. 10(a) - Negative: The standards increase impervious surfaces. 11(b) - City: The requirements apply throughout the City. 12(c) - Chronic: Parking areas will persist for a long time period. 13(d) - High: The City treats stormwater, but parking areas constitute a large percentage of the total impervious surfaces in developed areas. Collective impacts of required parking are high.	D/Q	Indirect	Impervious Surfaces	NEG	3	3	3	9	9
62	LDC	Parking, Loading, and Access Requirements	4.1.40	Standards for Off-street Parking and Access	Turnaround areas are required to prevent back-up movement onto arterial streets. Infill is allowed on an existing substandard public street. Driveways are required to be surfaced according to the standards established by the City Engineer. A minimum 19-foot length is provided from the sidewalk or future sidewalk to a garage or carport. Landscaping, buffering, and screening applies to all parking areas containing four or more spaces and to all parking areas and off-street loading facilities (Section 4.20.40 in Chapter 4.2). Screening along a ROW is a minimum 5-foot depth of buffer plantings.	1 - This section establishes standards for off-street drives and access. Encouraging infill will create more buildings and pavement, adding to impervious surfaces. Some requirements add to impervious surfaces and others require landscape buffers; therefore, the section is neutral with respect to impervious surfaces. Impervious surfaces increase the rate of runoff, concentrate pollutants, and interfere with groundwater recharge. Most of the runoff from impervious surfaces will reach the stormwater system; a small amount will infiltrate the ground in adjacent landscape areas and lawn areas. Required landscape buffers allow some percolation of stormwater. 10(a) - Neutral: The standards increase impervious surfaces and require landscape buffers. 11(b) - City: The requirements apply throughout the City. 12(c) - Chronic: Pavement and landscape areas will persist for a long time period. 13(d) - Low: The requirements apply only to specific circumstances.	C/N	Indirect	Impervious Surfaces	NTRL	0	0	0	0	0
63	LDC	Parking, Loading, and Access Requirements	4.1.50	Modification to Parking Requirements	Up to 40% of required parking spaces may be reduced in size for compact cars. The number of spaces required may be modified for uses such as group care facilities where automobile use or ownership is low.	1 - By reducing the dimensions of some parking spaces and reducing the number of required spaces based on lower usage, this section also reduces the amount of impervious surface. Impervious surfaces increase the rate of runoff, concentrate pollutants, and interfere with groundwater recharge. Most of the runoff from impervious surfaces will reach the stormwater system; a small amount will infiltrate the ground in adjacent landscape areas and lawn areas. These modifications to parking requirements benefit stream habitat. 10(a) - Positive: The standards reduce impervious surfaces. 11(b) - City: The requirements apply throughout the City. 12(c) - Chronic: Pavement and landscape areas will persist for a long time period. 13(d) - Low: Compact spaces can be used in many circumstances; reductions based on lower auto use would occur infrequently.	C/N	Indirect	Impervious Surfaces	POS	3	3	1	7	7

PATHWAY ANALYSIS - ZONING DISTRICTS

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							Cond/NQ	Indirect	Impervious Surfaces						
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LI	DOC	Chapter Name	Sect #	Sect. Name	Description	Discussion/Justification	Filter	Impact	Pathway/Conveyance	+/-/0 (a)	Mag. (b)	Dur. (c)	Int. (d)	ST	Tot.
64	LDC	Parking, Loading, and Access Requirements	4.1.60	Standards for Off-street Loading Facilities	Establishes off-street loading requirements and standards: a. minimum loading berths size is 35 feet long and 10 feet wide, b. sufficient space for turning movements, c. entrances and exits shall be provided, d. no off-street loading facilities shall be required where buildings can legally use an alley, and e. screening for off-street loading is required (see Section 4.1.40).	1 - Off-street loading area requirements contribute additional impervious surface to site development. Impervious surfaces increase the rate of runoff, concentrate pollutants, and interfere with groundwater recharge. Most of the runoff from impervious surfaces will reach the stormwater system; a small amount will infiltrate the ground in adjacent landscape areas and lawn areas. Additional impervious surfaces damage stream habitat. The loading area requirement is waived when alleys can be used for that purpose. Landscape buffers and screening is required. These modifications to loading have a beneficial effect on stream habitat. 10(a) - Positive: The standards both increase and reduce impervious surfaces. 11(b) - City: The requirements apply throughout the City. 12(c) - Chronic: Pavement and landscape areas will persist for a long time period. 13(d) - Low: Most stormwater runoff will be intercepted by the storm sewer.	C/N	Indirect	Impervious Surfaces	POS	3	3	1	7	7
65	LDC	Parking, Loading, and Access Requirements	4.1.70	Standards for Bicycle Access and Parking	Establishes minimum bicycle parking space size (2'x6") and a 5 foot offset between rows	1 - Bicycle access and parking standards contribute additional impervious surface to site development. Impervious surfaces increase the rate of runoff, concentrate pollutants, and interfere with groundwater recharge. Most of the runoff from impervious surfaces will reach the stormwater system; a small amount will infiltrate the ground in adjacent landscape areas and lawn areas. Additional impervious surfaces damage stream habitat. 10(a) - Positive: The standards add impervious surfaces. 11(b) - City: The requirements apply throughout the City. 12(c) - Chronic: Pavement will persist for a long time period. 13(d) - Low: Most stormwater runoff will be intercepted by the storm sewer.	C/Q	Indirect	Impervious Surfaces	POS	3	3	1	7	7
66	LDC	Landscaping, Buffering, Screening	4.2.10	Purpose	No mention of environmental benefits of landscaping.	1 - Landscape and landscaped areas have the potential to help protect stream habitat and generally improve environmental quality. Without a statement of purpose to that effect, some benefits to habitat and environmental quality may fail to materialize. 10(a) - Neutral: Habitat protection and environmental quality is not stated in the purpose. 11(b) - City: The purpose applies City-wide. 12(c) - Chronic: The purpose will persist until amended. 13(d) - Low: Amending the purpose statement would yield marginal benefits to habitat.	C/N	Indirect	Impervious Surfaces	NTRL	0	0	0	0	0

PATHWAY ANALYSIS - ZONING DISTRICTS

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LI	DOC	Chapter Name	Sect #	Sect. Name	Description	Discussion/Justification	Filter	Impact	Pathway/Conveyance	+/-/0 (a)	Mag. (b)	Dur. (c)	Int. (d)	ST	Tot.
67	LDC	Landscaping, Buffering, Screening	4.2.20	General Provisions	Significant plants and trees should be preserved to the greatest extent practicable. Trees of 8-inch or greater diameter measured at a height of 4 feet above grade and shrubs over 3 feet in height are considered significant. Planters and boundary areas shall have a minimum diameter of 5 feet (2.5-foot radius, inside dimensions). Where the curb or the edge of these areas is used as a tire stop for parking, the planter or boundary plantings shall be a minimum width of 7.5 feet. Irrigation systems are required.	1 - Tree protection and buffer plantings help prevent soil erosion and allow for aquifer recharge. Soil and vegetation filter some contaminants from surface water and groundwater, improving water quality and stream habitat. Irrigation increases percolation rates and ultimately bank flow along stream habitat. 10(a) - Positive: Landscaping standards reduce harmful impacts to stream habitat. 11(b) - City: Landscaping standards apply throughout the City. 12(c) - Chronic: Trees and shrubs persist for many years. 13(d) - Medium: Protecting vegetative cover and landscaped areas helps protect stream habitat.	C/Q	Indirect	Impervious Surfaces	POS	3	3	2	8	8
68	LDC	Landscaping, Buffering, Screening	4.2.30	Required Tree Planting	Tree plantings are required for all parking lots for four or more cars, public street frontages, and along private drives more than 150 feet long. Trees shall be planted outside the street right-of-way except where there is a designated planting strip or City-adopted street tree plan.	1 - Tree plantings help prevent soil erosion and allow for aquifer recharge. Soil and vegetation filter some contaminants from surface water and groundwater, improving water quality and stream habitat. 10(a) - Positive: Tree plantings reduce harmful impacts to stream habitat. 11(b) - City: Tree plantings apply throughout the City. 12(c) - Chronic: Trees and shrubs persist for many years. 13(d) - Medium: Protecting vegetative cover and landscaped areas helps protect stream habitat.	D/Q	Indirect	Impervious Surfaces	POS	3	3	2	8	8
69	LDC	Landscaping, Buffering, Screening	4.2.40.01	Parking, Loading, and Vehicle Maneuvering Areas	Buffering is required in conjunction with issuance of construction permits for parking areas containing four or more spaces, loading areas, and vehicle maneuvering areas....Decorative walls and fences may be used in conjunction with plantings, but may not be used by themselves to comply with buffering requirements.	1 - Landscape buffers help prevent soil erosion and allow for aquifer recharge. Soil and vegetation filter some contaminants from surface water and groundwater, improving water quality and stream habitat. 10(a) - Positive: Landscape buffers reduce harmful impacts to stream habitat. 11(b) - City: Landscape buffers apply throughout the City. 12(c) - Chronic: Trees and shrubs persist for many years. 13(d) - Low: Protecting vegetative cover and landscaped areas helps protect stream habitat.	D/N	Indirect	Impervious Surfaces	POS	3	3	1	7	7
70	LDC	Landscaping, Buffering, Screening	4.2.50	Screening (Hedges, Fences, Walls, Berms)	A chain link fence with slats shall qualify for screening only if a landscape buffer is provided in compliance with Section 4.2.40	1 - Landscape buffers are required. Buffers help prevent soil erosion and allow for aquifer recharge. Soil and vegetation filter some contaminants from surface water and groundwater, improving water quality and stream habitat. 10(a) - Positive: Landscape buffers reduce harmful impacts to stream habitat. 11(b) - City: Landscape buffers apply throughout the City. 12(c) - Chronic: Trees and shrubs persist for many years. 13(d) - Low: Protecting vegetative cover and landscaped areas help protect stream habitat.	D/N	Indirect	Impervious Surfaces	POS	3	3	1	7	7

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LI	DOC	Chapter Name	Sect #	Sect. Name	Description	Discussion/Justification	Filter	Impact	Pathway/Conveyance	+/-/0 (a)	Mag. (b)	Dur. (c)	Int. (d)	ST	Tot.
71	LDC	Flood Control and Drainageway Provisions	4.5.10	Purpose	... to protect open, natural streams and drainageways as an integral part of the City environment and to maintain both hydrological and biological functions of an open drainageway system in accordance with the Corvallis Drainage Master Plan. This is important in order to manage stormwater drainage, minimize maintenance costs, protect properties adjacent to drainageways, improve water quality, protect riparian plant and animal habitats, and provide opportunities for trail linkages.	1 - A statement of purpose to protect natural streams and drainageways. This protection has potential to benefit the stream habitat. 10(a) - Neutral: Habitat protection and environmental quality is not stated in the purpose. 11(b) - City: The purpose applies City-wide. 12(c) - Chronic: The purpose will persist until amended. 13(d) - Low: Amending the purpose statement would yield marginal benefits to habitat.	C/N	Direct	Multiple	NTRL	0	0	0	0	0
72	LDC	Flood Control and Drainageway Provisions	4.5.70	Standards in the Floodway	New construction, substantial improvements, and encroachments are prohibited within the 0.2-foot-rise floodway. The floodway is the portion of the floodplain where high volumes of moving water flow through streams or drainageways....Nonstructural development, such as parking lots, may be permitted within the floodway...with certification.	1 - Construction or encroachment is prohibited within the floodway. While this section focuses on protection of life and property from flooding, it also prevents direct contamination of stream habitat resulting from construction and release of contaminants caused by flood damage. 10(a) - Positive: Prevents contamination of stream habitat that might otherwise occur. 11(b) - City: The purpose applies City-wide. 12(c) - Chronic: The restriction will persist until amended. 13(d) - Low: Development activity within the floodway would be avoided by most developers even without the restriction.	C/N	Direct	Multiple	POS	3	3	1	7	7

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73	LDC	Flood Control and Drainageway Provisions	4.5.80	Drainageway Dedications	A drainageway dedication shall be required when (1) a parcel of land is divided into two or more parcels, whether by land partition or subdivision; (2) a permitted development of any kind (building, parking lot, etc.) is proposed on a vacant parcel of any size; (3) a Detailed Development Plan is proposed according to Chapter 2.5 for a parcel, regardless of whether structures exist; (4) a Special Development (Type I or II) is proposed for a vacant parcel of any size; or (5) development is proposed on a partially developed parcel that constitutes an increase of 50% or more impervious coverage. The effects of new development shall be cumulative; a dedication shall be required when the net effect reaches 50% or more impervious cover. A drainageway easement shall be required with further development of any partially or fully developed parcel when none of the above-listed items apply. Restrictions shall apply to structural improvements, regrading, or decrease in vegetative cover.	1 - Dedications and easements along drainageways allow stormwater management practices to be implemented. Such dedications or easements allow for installation of conventional stormwater collection and detention systems and for more progressive onsite best management practices that can benefit water quality and protect riparian habitat. 10(a) - Positive: Protects natural drainageways and allows for BMPs. 11(b) - City: The purpose applies City-wide. 12(c) - Chronic: Dedications and easements represent long-term commitments. 13(d) - Medium: This section allows for protection of natural systems and onsite mitigation.	C/N	Direct	Buffer	POS	3	3	2	8	8
74	LDC	P-AO(Professional and Administrative Office) District	3.11.20	Permitted Uses	Civic uses and most low-intensity commercial uses are permitted. Conditional uses for this zone also are included in this pathway. <u>Indicators:</u> Civic uses, business support, medical, research, financial, real estate	1 - Sources of contaminants for indicator uses include land application of horticultural chemicals and fertilizers by commercial landscaping contractors; use of cleaners, solvents, oils, and sealants for incidental maintenance and repairs to structures and equipment, and released from vehicle parking areas. Releases may occur into the air and incidental spills may occur on paved surfaces during day-to-day operations. Surface- and air-borne contaminants are then conveyed by rainfall into surface and groundwater, resulting in habitat damage. 10(a) - Negative: Land uses are a source of contaminants. 11(b) - Reach: Land uses and activities only apply within the specified zone. 12(c) - Chronic: Land uses and activities persist for years as a source of contaminants. 13(d) - Medium: Moderate harm to habitat because of the quantities and kinds of contaminants associated with this pathway.	D/N	Indirect	Contaminants	NEG	2	3	2	7	7